

- Sub B1
- b) catalyzing the deposition of tyramide in said cells comprising said intracellular analyte;
 - c) contacting said cells with a detectable label that directly or indirectly binds to tyramide, whereby said cells comprising said intracellular analyte are specifically labeled; and
 - d) detecting a signal from said cells comprising said detectable label using a flow cytometric device, wherein said signal indicates the presence of said intracellular analyte, and wherein said signal is at least 10-fold greater than a signal obtainable by standard flow cytometry methods using isotype/subtype matched nonspecific immunoglobulin as a negative control.

2. (Amended) A method of detecting the presence of an intracellular analyte in one or more cells by flow cytometry, the method comprising:

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- a) fixing and permeabilizing said cells;
 - b) catalyzing the deposition of tyramide conjugated to a detectable label in said cells comprising said intracellular analyte, whereby said cells comprising said intracellular analyte are specifically labeled; and
 - c) detecting a signal from said cells comprising said detectable label using a flow cytometric device, wherein said signal indicates the presence of said intracellular analyte, and wherein said signal is at least 10-fold greater than a signal obtainable by standard flow cytometry methods using isotype/subtype matched nonspecific immunoglobulin as a negative control.

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5. (Amended) A method according to claim 1 or 2, wherein said catalyzing step comprises:

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- (i) incubating the fixed and permeabilized cells with a binding partner that specifically binds to said analyte, wherein said binding partner is conjugated to an enzyme that, in the presence of substrate for said enzyme and tyramide, catalyzes the deposition of tyramide in said cells comprising said intracellular analyte;

(ii) removing unbound binding partner from said cells; and

(iii) contacting bound binding partner with tyramide and said enzyme substrate, whereby said enzyme catalyzes the deposition of tyramide in said cells comprising said intracellular analyte.

18. (Amended) A method according to claim 1 or 2, wherein said catalyzing step comprises:

(i) incubating the fixed and permeabilized cells with a first binding partner that specifically binds to said first binding partner, wherein said second binding partner comprises an enzyme, wherein said second binding partner is conjugated to an enzyme that, in the presence of substrate for said enzyme and tyramide, catalyzes the deposition of tyramide in said cells comprising said intracellular analyte;

(ii) removing unbound second binding partner from said cells; and

(iii) contacting bound second binding partner with tyramide and said enzyme substrate, whereby said enzyme catalyzes the deposition of tyramide in said cells comprising said intracellular analyte.

32. (Amended) A method according to claim 31, wherein the presence of said intracellular analyte is correlated to a diagnosis of a disease in said patient.